

## ER Site No. 235: Storm Drain System Outfall (SouthWest of TA-IV)

ADS: 1309

Operable Unit: Tijeras Arroyo

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### Site History

ER Site 235 lies on federally owned land controlled by Sandia National Laboratories / New Mexico (SNL/NM). The site is located about 500 feet southwest of Technical Area IV (TA-IV) on the northern rim of Tijeras Arroyo near the Pennsylvania Avenue bridge. The site covers approximately 1.21 acres with elevations ranging from 5,350 to 5,320 feet amsl. The site consists of an inactive 15- to 70-foot wide, earthen flood-control channel that extends for about 1,500 ft below the Ninth Street Channel baffle chute (energy dissipator). Storm water flowed occasionally along the channel for several decades. Prior to April 1999, the channel diverted storm water from the baffle chute to Tijeras Arroyo. In conjunction with the construction of a new Pennsylvania Avenue bridge across the Tijeras Arroyo, storm water was permanently diverted away from ER Site 235. The watershed for ER Site 235 previously encompassed approximately 475 acres of the northeastern part of Kirtland Air Force Base (KAFB), including SNL/NM TA-I and TA-IV. Industrial waste streams did not drain into the watershed.

The soil at ER Site 235 has been identified as the Bluepoint-Kokan Association, which consists of the Bluepoint loamy fine sand and the Kokan gravelly sand. The surficial deposits are underlain by the upper unit of the Santa Fe Group. The depth to the regional aquifer at ER Site 235 is projected to be approximately 450 feet bgs. The nearest shallow monitor well, TJA-3, is located 700 feet to the northeast of ER Site 235. The shallow water-bearing zone was not encountered in TJA-3. The nearest water-supply well, KAFB-11, is located approximately 1.5 miles northeast of ER Site 235. The nearest downgradient water-supply well is KAFB-1, which is located approximately 1.4 miles northwest of the site.

ER Site 235 was first identified as a possible environmental concern in November 1993. The site was not listed as a potential release site during the CEARP process in 1985 or the Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) in 1987. No discoloration of soils was observed during any of the site-reconnaissance or soil-sampling activities.

During the 1990s, an automated storm-water monitoring station was located at the upper end of the baffle chute. Storm water flowed through the outfall about a dozen days per year. The water samples were analyzed for metals, Biochemical oxygen demand (BOD), Chemical oxygen demand (COD), Semi-Volatile Organic Compounds (SVOCs), Volatile Organic Compounds (VOCs), phenolics, Polychlorinated Biphenyls(PCBs), cyanide, fluoride, gross alpha/beta, High Explosive (HE) compounds, coliform, oil and grease, phosphorus, residual chlorine, Total Kjeldahl Nitrogen (TKN), Total Dissolved Solids (TDS), and Total Suspended Solids(TSS). In accordance with the SNL/NM National Pollutant Discharge Elimination System (NPDES) application with the U.S. EPA, storm-water results were reported annually in the SNL/NM Site Environmental Report. No surface-water quality problems were identified. The COCs were conservatively based upon chemicals used at SNL/NM. However, no releases are known to have occurred that involved chemical spills of sufficient volume to affect storm-water quality at ER Site 235.

Three investigations were conducted in 1994. A visual survey for Unexploded Ordnance / High Explosive (UXO/HE) did not identify any UXO/HE material. A radiation survey also was conducted; no radioactive anomalies were detected. A photographic review was conducted using over 40 years of historical aerial photography. No spills or other suspicious areas were identified on the photographs.

In September 1994, confirmatory soil samples were collected from three locations along the ER Site 235 channel. Soil samples were collected from two depth ranges (0-0.5 and 0.5-3 feet bgs). The six soil samples were analyzed for the chemicals that are either indicative of, or are used in the manufacture of, the Constituents of Concern (COC)s. The analytes included RCRA metals, beryllium, chromium-VI, VOCs, SVOCs, Total petroleum hydrocarbons (TPH), and various radionuclides. The soil samples were analyzed by two off-site laboratories. Four metals (arsenic, cadmium, chromium, and lead) were slightly above background. No VOCs, SVOCs, or TPH were detected in the soil samples. Radionuclides were within background. In December 1999, a risk assessment was prepared for the Notice of Deficiency (NOD) response.

## **Constituents of Concern**

The possible COCs included cooling-tower antifoulants (chromates, sodium hydroxide, hydrochloric acid), diesel fuel, and mineral oil. However, no significant chemical releases are known to have occurred in the watershed.

## **Current Hazards**

No chemical or radioactive hazards are present at ER Site 235.

## **Current Status of Work**

In June 1995, a No Further Action (NFA) proposal for ER Site 235 was submitted to NMED. Responses to NOD comments were submitted in October 1996 and December 1999. ER Site 235

was approved for No Further Action in March 2000. NMED approved the Class 3 Permit Modification on September 15, 2000.

### **Future Work Planned**

No future work is planned for ER Site 235.

### **Waste Volume Estimated/Generated**

No waste was disposed of, or generated, at ER Site 235.

**Information for ER Site 235 was last updated Jun 27, 2001.**